

- 1 In a device for traversing a linear flexible product for winding upon a spool or core, said device including a pivotally mounted traverse arm, a rotating motor, and a link interconnecting a point on a rotating part of said motor with a point on said traverse arm for imparting arcuate motion thereto over a predetermined arcuate path, the improvement comprising: means for controlling rotation of said
- 5 motor through arcuate sectors of 180 degrees and less, such that a free end of said traverse arm moves at a substantially uniform rate of traverse over said predetermined path; said means for controlling rotation comprising motor means for driving said spool at a predetermined uniform angular velocity, an electronic controller feedback means driven by rotation of said spool for generating a digital position reference signal to said controller, said controller including a program to rotate said motor to a desired
- 10 position corresponding to said reference signal required to move said traverse arm disregarding any non-uniform motion created by linkage deviations, and a process control device for selecting ratio and position criteria, and communicating said criteria to said controller feedback means.

2 The improvement set forth in claim 1, in which said controller is manually adjusted.

3 The improvement set forth in claim 1, in which the linear flexible product is fed coaxially with respect to a pivot axis of said traverse arm, and parallel to said arm to be discharged from said arm adjacent a free end of said traverse arm.

4 The improvement in accordance with claim 3, said traverse arm including tubular guiding means adjacent said free end thereof.

- 5 In a device for traversing a linear flexible product for winding upon a spool or core, said device including a pivotally mounted traverse arm, a rotating motor, and a link interconnecting a rotating part of said motor with a point on said traverse arm, the improvement comprising means on said arm for receiving said product along a path of motion coaxial with respect to a pivot axis of said arm, and guiding means on said arm for guiding said product to a point of discharge adjacent said spool.

- 6 In a linear traverse mechanism where guiding the spooling of a flexible linear product including a pivotally mounted traverse arm dispensing said product at a pre end thereof, and motion means where imparting arcuate motion to said arm, the improvement comprising; means for sensing the instantaneous location of a free end of
- 5 said arms in terms of digital data; a master control block controlling the angular direction, velocity and position of said traverse motor; means for transmitting said digital data to said control block on a continuous basis; logic blocks for determining the direction of rotation of said motor means; and a logic processor having a manually entered program relative to a traverse width, and starting and finishing locations on a
- 10 given spool; where by control of said motor means is dependent on the instantaneous position of said linkage arm relative to the instantaneous position indicated by said processor.

7 The improvement in accordance with claim 6, further comprising a winding means, a motor driving said winding means, a digital feedback encoder sending a digital count signal to said control means, motion of said traverse arm being reversed upon the attainment of a predetermined count.

8 The improvement in accordance with claim 7, including means or
momentarily halting movement of said traverse arm at one end of a traverse path of
movement during a partial revolution of said winding means.